

AQI Toolkit for Weathercasters



September 2005

AQI Toolkit For Weathercasters

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Research Triangle Park, NC 27711



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CDs

CD#1

- Electronic Copies of Presentations and Handouts
- Smog City (an interactive game that teaches users about the relationship between weather, human activities, and air pollution)

CD#2

- Forecast Earth: Air Aware Video (About Air Pollution and Health)

Acknowledgments

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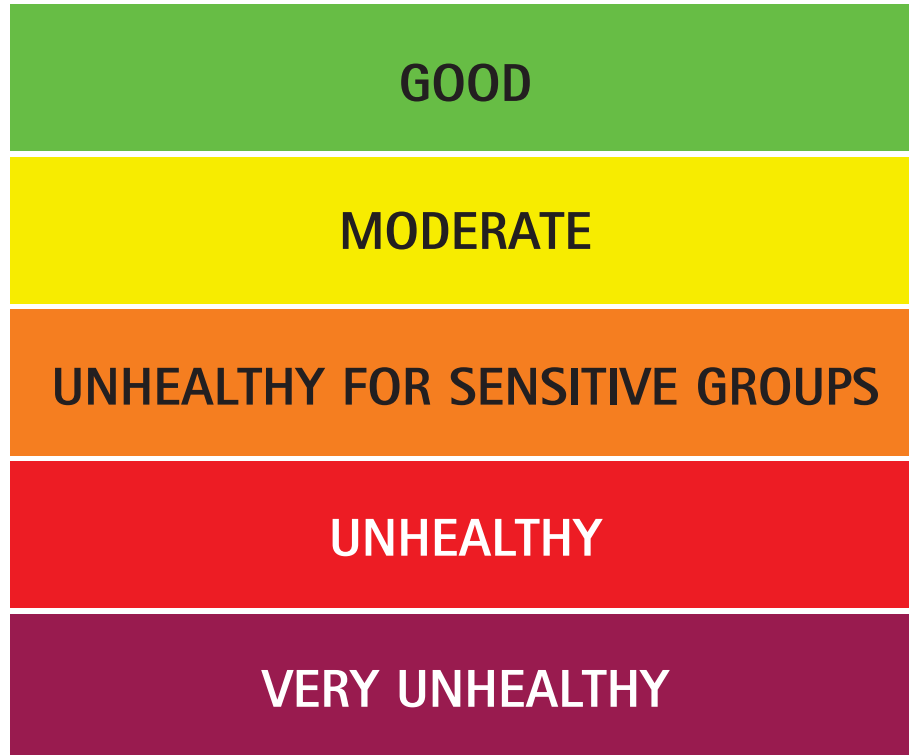
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Notice

This document has been reviewed in accordance with U.S. Environmental Protection Agency policy and approved for publication. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

Toolkit Overview



Toolkit Overview



Welcome to the Air Quality Index (AQI) educational toolkit for weathercasters. This toolkit was designed by the U.S. Environmental Protection Agency (EPA) for weathercasters who make educational presentations to schools and civic groups. The toolkit contains key materials to help audiences understand how they can use the AQI to find out about local air quality and how they can protect their health when the air is polluted.

Your Role in Air Quality Awareness

Air pollution is a serious public health issue. Because of the linkage between weather and air pollution, weathercasters play an important role in raising air quality awareness. Like many weathercasters, you may be incorporating air pollution alerts and associated health messages into your weathercasts. Presentations by weathercasters offer another powerful venue for educating school children, families, teachers, and civic groups about air quality and health.

Two pollutants in particular, ozone and particle pollution, are often found at unhealthy levels in many parts of the United States. Real-time data and forecasts for ozone and particle levels, as well as messages about how to protect health, are now available to the public through many channels, including EPA's AIRNow web site (www.airnow.gov). EPA and others are working to help educate the public about the resources they can use to protect their health from air pollution.

What's In the Toolkit?

Presentations

- **Key Messages** – Bullet point lists of key air quality messages for each presentation (for Grades 3-5, Grades 6-8, and Civic groups).
- **Notes Pages** – Printed black-and-white copies of slides and talking points for each slide. Long and short versions for civic groups are provided to accommodate available presentation time.
- **Handouts** – Simple one- or two-page, age-appropriate handouts for students and adults.
- **Transparencies** – A set of overheads (in both transparency and PowerPoint formats) for each presentation. Long and short versions for civic groups are provided to accommodate available presentation time.

Additional Resources for Weathercasters

- **Fact Sheets** – Basic information on the AQI, air quality mapping and forecasting, the health effects of air pollution, and relevant publications and web sites for further information.
- **Optional Additional Activities** – For Grades 6-8 and Civic groups.

Materials to Leave with Teachers

- A set of **Classroom Activities**.
- **Background Information** on air pollution, health, and the AQI.
- **Other Resources** – Descriptions of additional curricula, classroom activities, publications, and web sites.

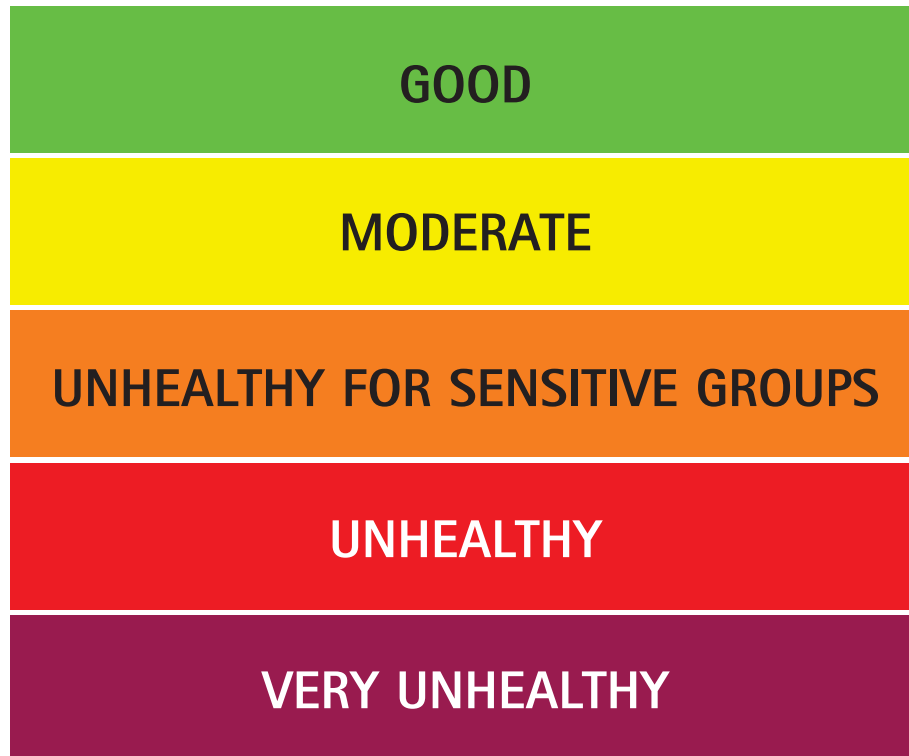
CDs

- Electronic copies of the presentations and handouts in this toolkit.
- A copy of the interactive game, *Smog City*.
- A copy of *Forecast Earth: Air Aware* video — Produced in 2004 by The Weather Channel and EPA.

Quick Prep

- Read the fact sheets in this toolkit to familiarize yourself with the AQI, the health effects of air pollution, and air quality mapping and forecasting.
- Visit EPA's AIRNow web site at www.airnow.gov for further information about the AQI and to obtain local air quality information.
- Use the Key Messages and Notes Pages in this toolkit to prepare for the presentation.
- *Checklist:*
 - ✓ Your presentation notes or script
 - ✓ CD or overhead transparencies
 - ✓ One copy of the appropriate handout for each participant
 - ✓ For schools, a set of the *Materials to Leave with Teachers*

Presentations



Grades 3-5

Key Messages: Grades 3-5 Presentation

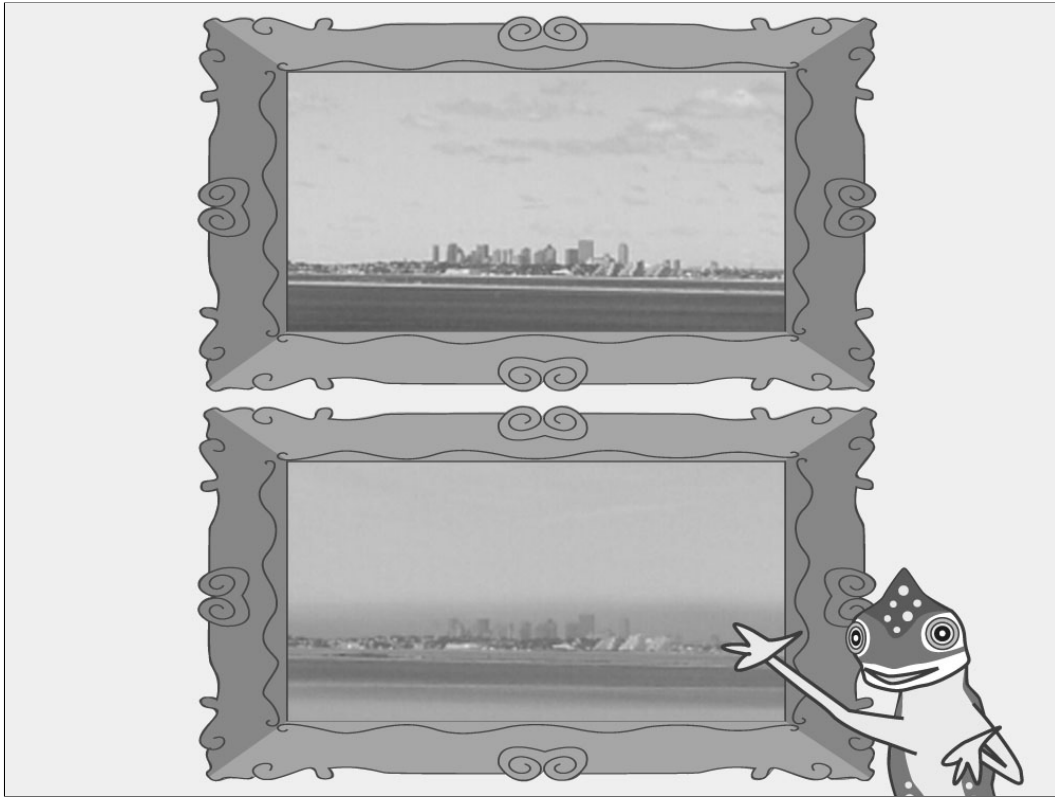


- Breathing dirty air is not good for people. For example: You might feel like it's harder to breathe, you might cough, or your chest might feel tight.
- You can help protect your health when the air is dirty. Here are three things you can do.
 1. Find out how clean your air is each day.
 - You can do this by checking the AQI, just like checking the weather report. The AQI (or the Air Quality Index) uses colors to tell you how clean or dirty the air is. For example, green means the air is clean. Red means the air is unhealthy.
 - You can always find the AQI on the Internet at a site called AIRNow at: www.airnow.gov . You also might hear about the AQI on TV during the weather forecast or on the radio, or you might see it on the weather page in the local newspaper.
 - Tell your parents about the AQI so they can check how clean or dirty the air is.
 2. If you play outside when you *know* the air is polluted, you can protect your health by taking it easier. For example, walk instead of run, take breaks often, or play outside at another time or on another day when the air is cleaner.
 3. If you notice any signs when you are playing outside like coughing, pain when you take a deep breath, chest tightness, or wheezing, stop playing and tell an adult.
 - If you have asthma, pay special attention on polluted days. If you think you or a friend may be having an asthma attack, tell an adult.

Notes Pages: Grades 3-5



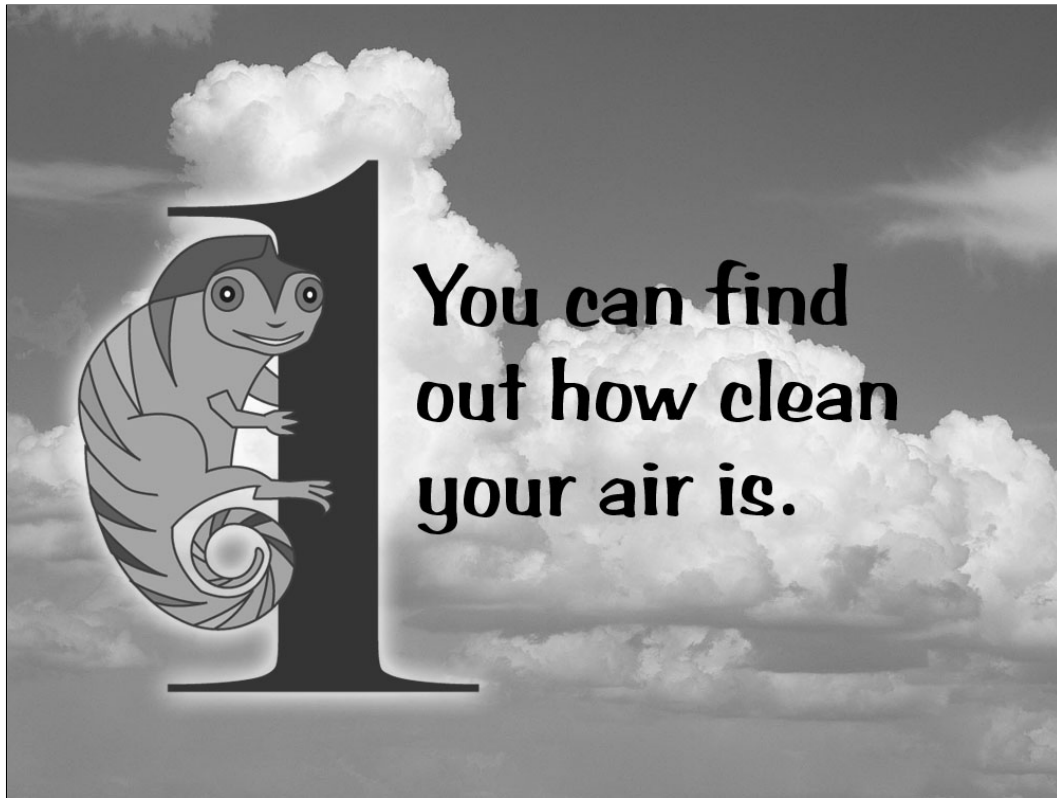
- Now I'd like to talk about air, which is a big part of weather. K.C. Chameleon and his friends will help me do this.
- We're all breathing all the time. With every breath, what do we take in? (Response: "Air")
- You can feel the air right now on your hand if you just swing it gently back and forth.
- Most of the time, the air looks clear. But have any of you ever seen air when it wasn't clear? Sometimes the air can look a little dirty, or smoky, or hazy, like this. (*show next slide*)



- These pictures show the same place with clean air and dirty air.
- Sometimes when air looks dirty, that can be a sign that pollution is in the air.
- Does anyone know what pollution is?
- That's right. Pollution means that the air is dirty from things like dust, chemicals, or soot (soot is a black substance, like that in chimneys, that is formed from burning things like wood or oil).



- Here K.C. is showing us some of the biggest pollution sources: cars and trucks, factories that make things like desks and chairs, power plants that make electricity, some ordinary products like house paints, and many other things. Also, things in nature, like forest fires and volcanoes, can pollute the air.
- What do you think happens when people breathe air that is dirty?
- Breathing dirty air is not good for people. For example: You might feel like it's harder to breathe, you might cough, or your chest might feel tight.
- How can you protect yourself from dirty air?



- Sometimes you can see when the air is dirty, but sometimes you can't. So we need another way to tell if our air is dirty.
- To do that, we can use something called the Air Quality Index, or AQI for short. Let's take a look at what that is.



- The AQI uses colors to tell us how clean or dirty the air is.
- Which color do you think means the air is clean? Green,
the same color that traffic lights use to tell you it's OK
to go, means the air is clean.
- Which color do you think means the air is really dirty? It's the
darkest color: Purple.
- Maybe you're wondering: How can I find the AQI? Checking the
AQI is like checking the weather report.



- You can always find the AQI on the Internet at a site called AirNow at: www.airnow.gov



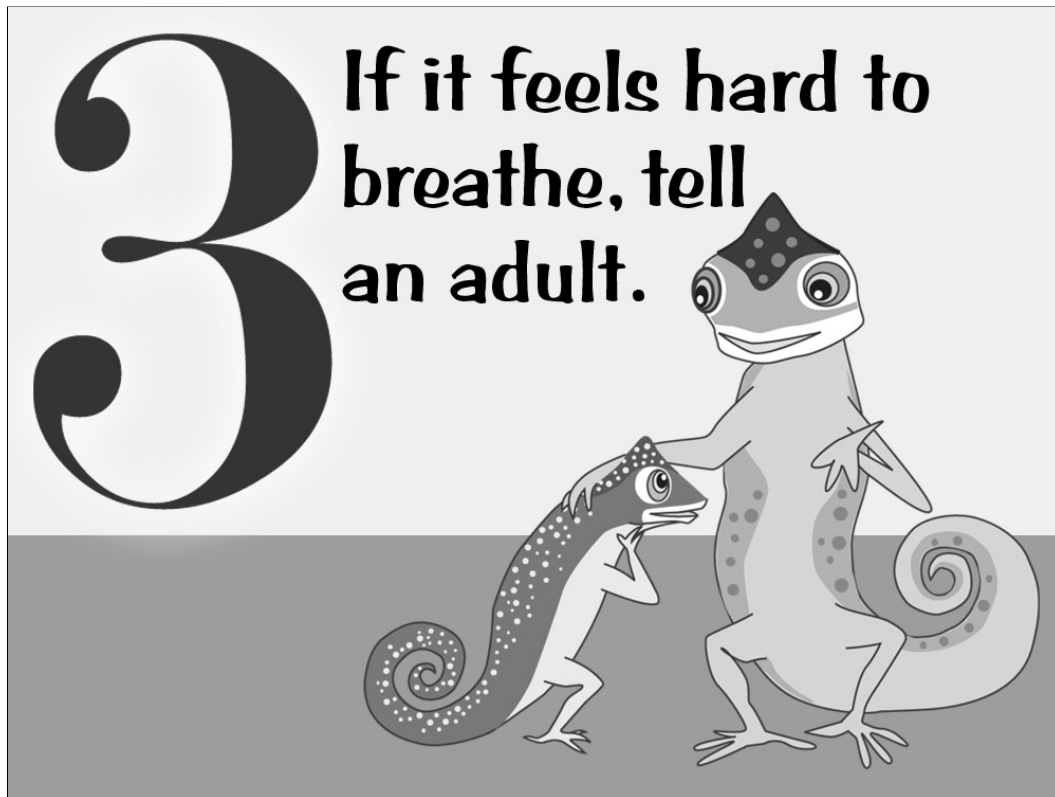
- When the air is polluted, sometimes you'll hear about it on TV during the weather forecast.



- Sometimes you, or your parents, can find it on the weather page in the newspaper.
- So finding out how clean or dirty the air is each day is one thing you can do to protect your health. Here's another thing you can do.



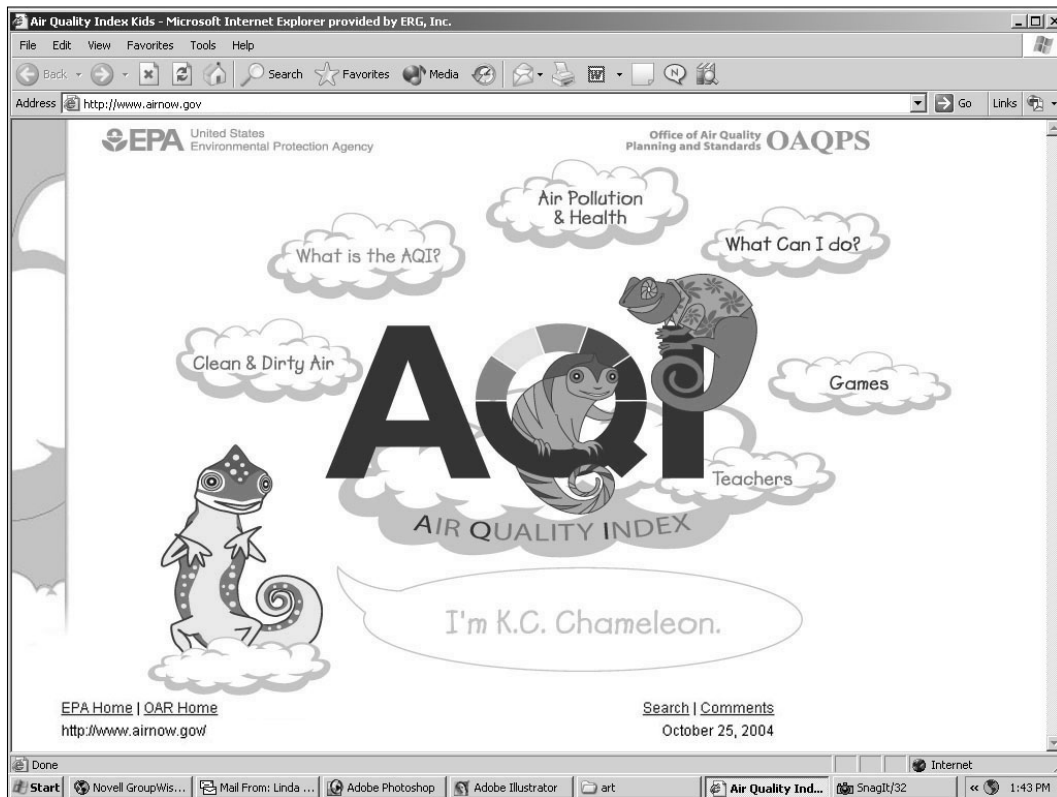
- Exercise and playing outside are good for you. But when the air is dirty, you should take some simple steps to protect your health.
- If you play outside when you *know* the air is polluted, you can take it easier. That could mean, for example, walking instead of running, taking frequent breaks, or planning to play outside at another time or on another day when the air is cleaner.
- Let's think why this makes sense. Do you breathe more when you're very active or when you're taking it easier?
- We don't breathe as hard when we're taking it easier, which is a good thing if the air is polluted.
- Here's another thing you can do.



- If you notice any signs when you are playing outside—like unusual coughing, pain when you take a deep breath, chest tightness, or wheezing—stop playing and tell an adult.
- If you have asthma, a lung condition that can sometimes make it difficult to breathe, pay special attention on polluted days. If you think you or a friend may be having an asthma attack, tell an adult.
- Let's review the three things you can do.



- If you can, find out what the air quality color is each day. You might want to tell your parents about the AQI colors so they can help you check how clean or dirty the air is.
- If the air is dirty, take it easier when you play outside, or change your play time to when the air is better.
- If you have a hard time breathing when the air is dirty, tell an adult.



- Here's a cool website where you can learn more about the air quality colors and what they mean.
- Here you can learn more about air pollution and the AQI and play some games.

Pass out handout

- This handout reminds you about what you can do. It also shows you where this kids' website is and where you or your parents can go to get AQI information.

Student Handout: Grades 3-5

Breathe Smart!

Three Things KIDS Can Do



1

Find out what color day it is for air quality.

- Visit the AIRNow web site at www.airnow.gov
- Tell your parents about the AQI so they can help you.

2

Protect your health when the air is dirty.

- Take it easier when you play outside.
- If it feels harder to breathe, tell an adult.



3

Visit the AQI kids' site at: www.airnow.gov
(click on "Kids" on the left side of the web page)



Transparencies: Grades 3-5

**Hi.
What color is
your air today?**









**You can find
out how clean
your air is.**

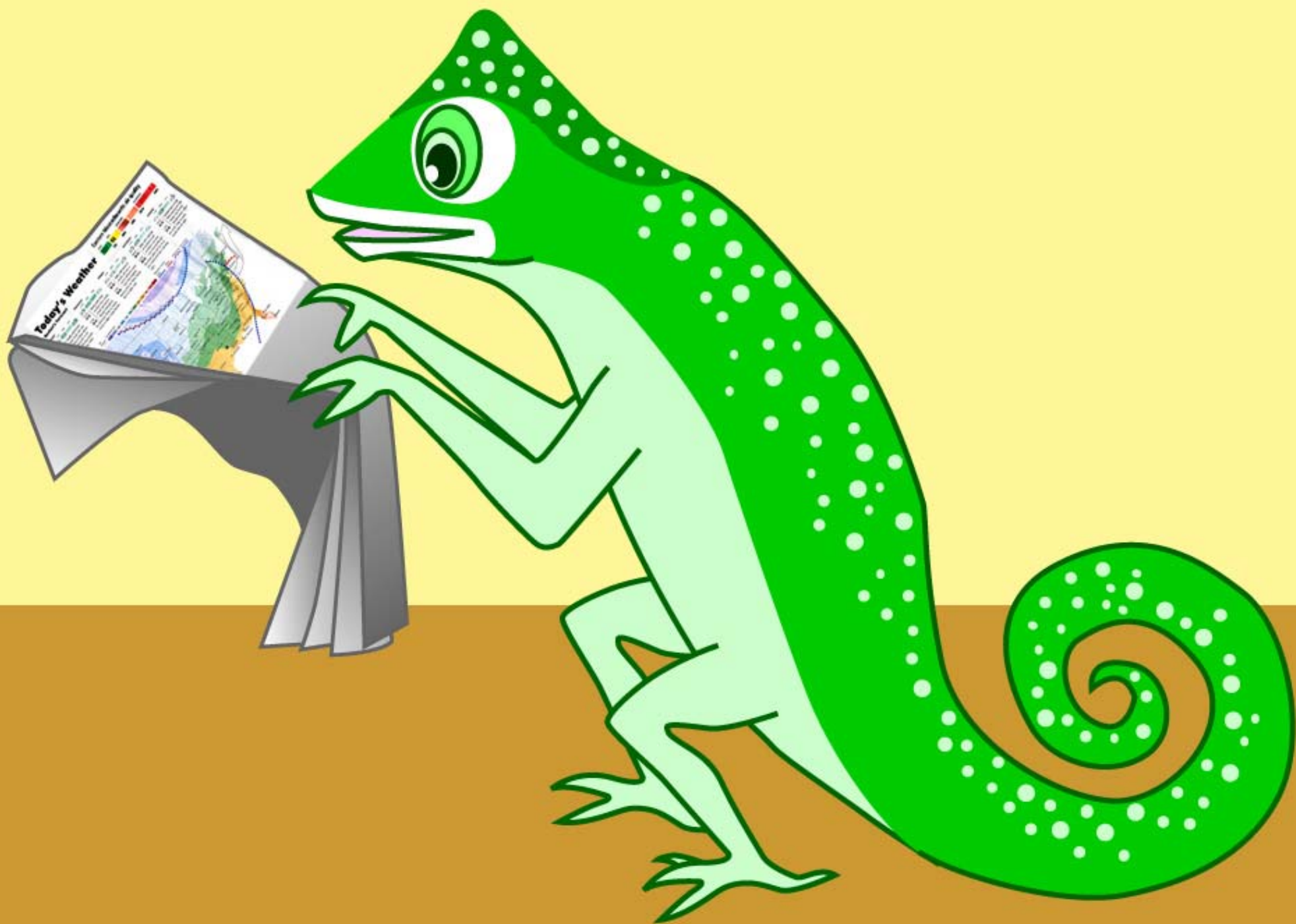


AIR QUALITY INDEX

www.airnow.gov







Take it easier when
you play outside.

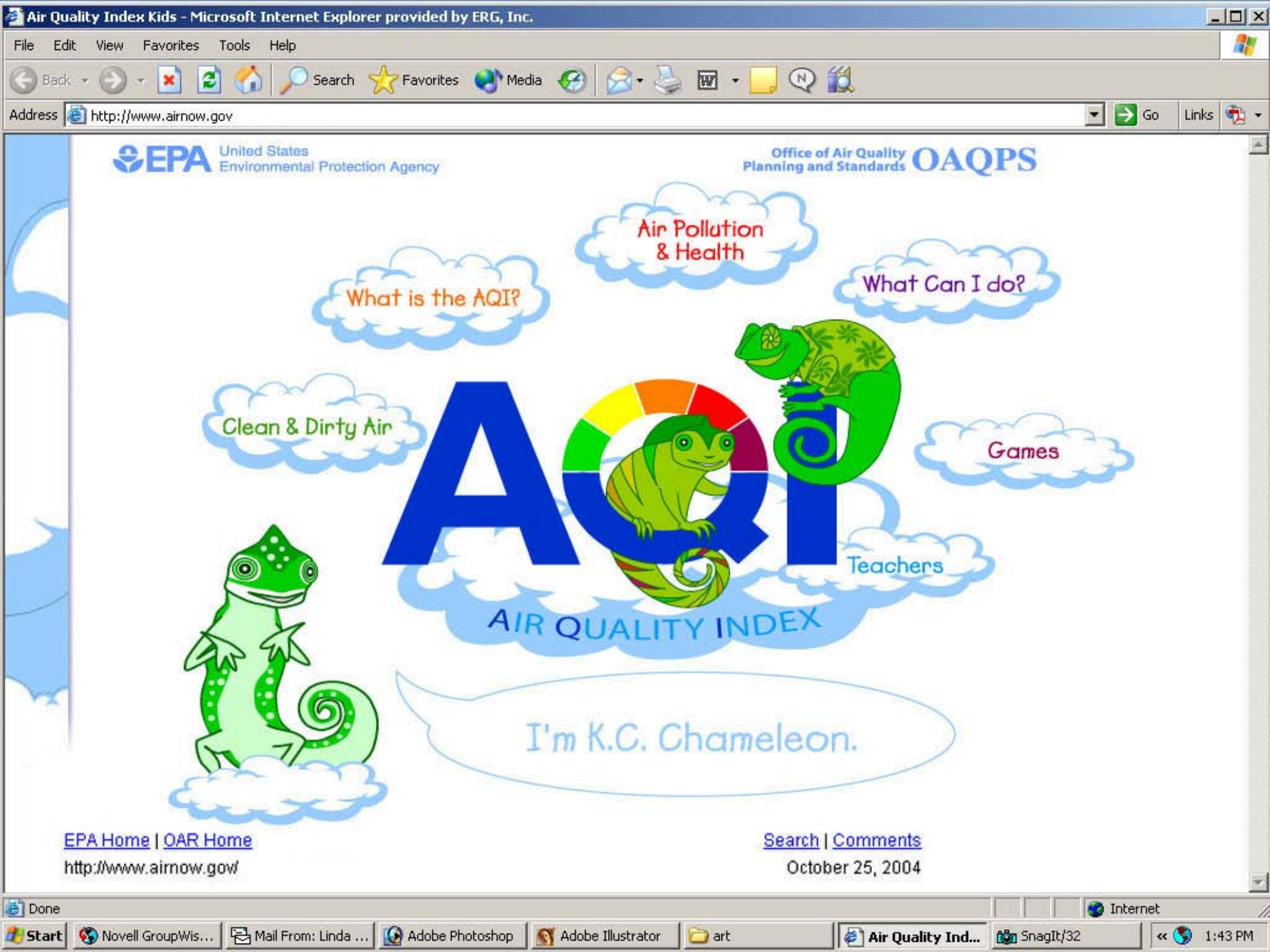


3

If it feels hard to
breathe, tell
an adult.







EPA United States Environmental Protection Agency

Office of Air Quality Planning and Standards **OAQPS**

What is the AQI?

Air Pollution & Health

What Can I do?

Clean & Dirty Air

Games

Teachers

AQI
AIR QUALITY INDEX

I'm K.C. Chameleon.

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October 25, 2004